Valved Balloon Stent (detailed description):

This invention is concerned with a lined inflatable and dilatable valved balloon stent (the stent is dilatable and its lining is either inflatable or dilatable, the balloon is inflatable and deflatable) that will be introduced inside vessels to function as a valve.
So that the stent is introduced in its smaller size then dilated to take the size of the intended vessel; the balloon will then be inflated with an appropriate material e.g. carbon dioxide, normal saline, air.
Apart from the central balloon the proximal opening can be inflatable.
In simpler terms, it's a cage like design mounted on the dilatable stent having a narrower opening on one side and the cage from the other side (the narrowing can be inflatable) and an inflatable ball enclosed. This ball functions as the valve.

Figure 1 demonstrates a sketch of the invention.

For this purpose the metallic dilatable stents in common use in cardiology practice can be modified to this new shape. The balloon moving inside the cage can be prepared from any inflatable and non reactive tissue e.g. similar to valvotomy balloons in common practice.
During placement of this valved balloon stent, the previous damaged non functioning valve can be crushed (putting the new valve in the place of the old one exactly).
This procedure will be done through per catheter intervention in the catheterization laboratory. It will allow emergency as well as permanent valve replacement when other options are worrisome.

I expect it thus to revolutionize the practice. Because the ability to perform per catheter inflatable valve replacement without mortality will definitely make surgical corrections of simple as well complicated cardiac lesions be not needed or at least deferrable to the time where they could be done with less mortality.

Previous state of the art:

A surgical procedure is undertaken with its inherent costs, risks and problems to replace the non functioning valve with another human, animal or metallic. Fixing an animal origin valve through catheterization.

Problems in the previous state of the art:

High cost and associated risks of surgical operation for valve replacement.
Non malleability in dealing with the valve after its placement.
The high cost of the valve itself.

What is new about this invention?

Achieve the same result of surgery through interventional catheterization.
Malleability in the dealing with the valve during and after placement.
Avoiding the risks and costs of the surgical or operation.

How can it be used ?

A selected company producing the common use intravascular stent will be chosen after agreement with the inventor to upgrade some of its stents with the new designs and linings I suggested.